

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2019 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: CORELITE

Report Number: P938256

Luminaire Tested: SQ4-FB-150U-050D-93050-1D-UNV-STD-W-12-5000K

Issue Date: 12/17/2024

Test Information

Test Method: LM-79-2019
Report Number: P938256
REPORT IS A COMBINATION OF REPORTS P933621 AND P933786
Test Lab: INNOVATION CENTER
Issue Date: 12/17/2024
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: CORELITE
Catalog Number: SQ4-FB-150U-050D-93050-1D-UNV-STD-W-12-5000K
Description: CORELITE SQ4 SUSPENDED INDIRECT LED LUMINAIRE WITH Batwing Frosted Continuous Roll L
Light Source: -
Ballast/Driver: -

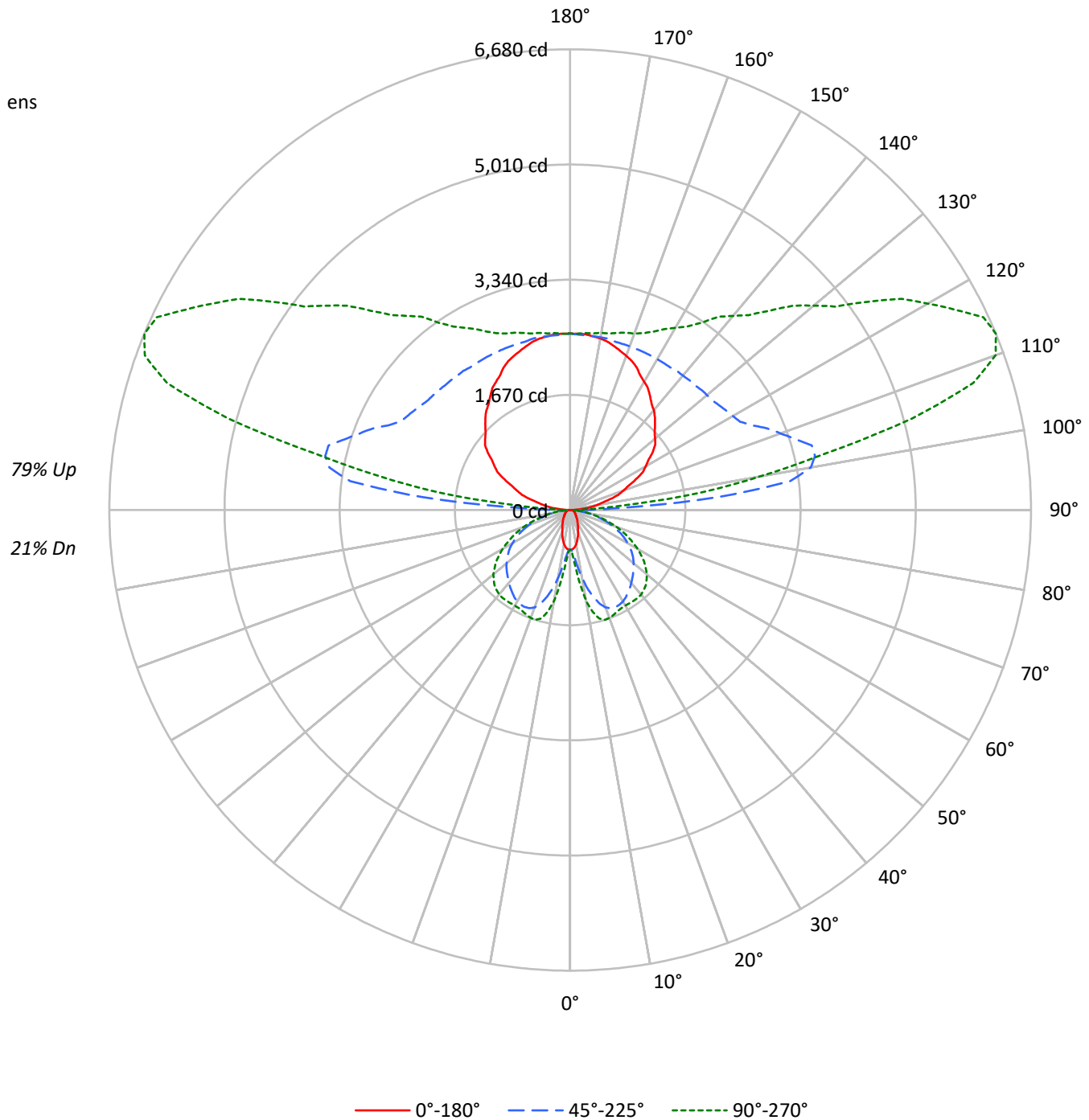
Summary

Lumens per Lamp: N/A
Luminaire Lumens: 21038.1 lumens
Efficiency: N/A
Efficacy: 126.1 lumens/watt
Spacing Criteria (0/90/45): 0.71 / 2.69 / 2.33
Luminous Opening: Rectangular w/ Sides (W: 0.29' x L: 12' x H: 0.1')
CIE Type: Semi-Indirect

Input Watts (W): 166.8
Input Voltage (V): NR
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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CATALOG NUMBER: SQ4-FB-150U-050D-93050-1D-UNV-STD-W-12-5000K

Luminous Intensity Polar Plot





TEST NUMBER: P938256

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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20				20				20				20				20				
RC	80				70				50				30				10			0	
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0
RCR																					
0	100	100	100	100	89	89	89	89	67	67	67	48	48	48	30	30	30	30	30	30	21
1	91	87	83	80	80	77	74	71	58	56	54	41	40	39	26	25	24	24	24	24	17
2	83	75	70	65	73	67	62	58	51	48	45	36	34	32	22	21	20	20	20	20	14
3	75	66	59	53	66	59	53	48	45	40	37	32	29	27	20	18	17	17	17	17	12
4	69	58	50	45	60	52	45	40	39	35	31	28	25	23	17	16	14	14	14	14	10
5	63	51	44	38	55	46	39	34	35	30	27	25	22	19	15	14	12	12	12	12	8
6	57	46	38	32	51	41	34	29	31	26	23	22	19	17	14	12	11	11	11	11	7
7	53	41	33	28	47	37	30	25	28	23	20	20	17	14	12	11	9	9	9	9	6
8	49	37	30	24	43	33	27	22	25	21	17	18	15	13	11	9	8	8	8	8	5
9	45	34	26	21	40	30	24	19	23	18	15	16	13	11	10	9	7	7	7	7	5
10	42	31	24	19	37	27	21	17	21	17	14	15	12	10	10	8	6	6	6	6	4

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	1776	1776	1776
5°	1736	2053	2388
10°	1575	2994	3958
15°	1339	3913	4780
20°	1091	4535	4871
25°	910	4747	4772
30°	768	4778	4763
35°	679	4700	4886
40°	592	4599	5013
45°	537	4524	5033
50°	493	4458	4950
55°	472	4360	4730
60°	484	4171	4384
65°	505	3882	3908
70°	538	3388	3301
75°	599	2764	2576
80°	660	1920	1736
85°	596	1020	888

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 90°
 Luminance: 6384 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	74.3	0.4
10°-20°	329.2	1.6
20°-30°	575.9	2.7
30°-40°	741.3	3.5
40°-50°	828.0	3.9
50°-60°	793.1	3.8
60°-70°	628.5	3.0
70°-80°	369.6	1.8
80°-90°	112.4	0.5
90°-100°	1247.1	5.9
100°-110°	3278.8	15.6
110°-120°	3399.8	16.2
120°-130°	2727.0	13.0
130°-140°	2139.7	10.2
140°-150°	1642.3	7.8
150°-160°	1182.8	5.6
160°-170°	723.7	3.4
170°-180°	244.5	1.2
0°-30°	979.4	4.7
0°-40°	1720.7	8.2
0°-60°	3341.8	15.9
0°-90°	4452.3	21.2
90°-120°	7925.7	37.7
90°-150°	14434.9	68.6
90°-180°	16586.0	78.8
0°-180°	21038.1	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	574	574	574	574	574	
5°	560	600	676	764	792	52
15°	419	774	1304	1581	1630	117
25°	268	877	1553	1621	1623	123
35°	181	838	1462	1546	1606	113
45°	124	668	1293	1481	1547	96
55°	89	425	1097	1274	1309	81
65°	70	225	814	916	929	70
75°	52	138	447	491	493	54
85°	18	42	111	122	124	20
90°	17	48	130	65	65	15
95°	165	646	2148	1108	754	183
105°	591	895	3625	5503	5134	626
115°	1049	1274	2904	5792	6611	1036
125°	1460	1636	2641	4463	5265	1296
135°	1739	1915	2558	3602	4085	1346
145°	2018	2146	2526	3074	3314	1264
155°	2280	2344	2526	2773	2854	1048
165°	2461	2493	2526	2625	2658	694
175°	2558	2558	2543	2576	2576	243
180°	2558	2558	2558	2558	2558	



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CANDELA DISTRIBUTION (FULL):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
0°	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3	574.3
2.5°	574.3	574.3	578.0	579.8	583.5	585.3	589.1	592.7	603.8	605.7	609.3
5°	559.5	566.9	590.9	600.1	626.0	661.0	675.8	699.8	749.7	764.4	773.7
7.5°	537.3	553.9	613.0	627.8	692.5	784.8	823.5	875.3	954.7	993.4	1024.8
10°	502.3	537.3	642.6	677.7	782.9	923.3	995.2	1067.3	1187.3	1240.9	1261.2
12.5°	463.4	520.7	674.0	722.0	873.4	1078.4	1165.2	1244.6	1381.2	1453.3	1464.3
15°	419.2	496.7	703.5	773.7	969.5	1207.6	1303.7	1401.5	1529.0	1580.6	1593.6
17.5°	380.4	478.2	731.2	805.1	1043.3	1324.0	1421.8	1503.1	1606.5	1641.6	1650.8
20°	332.4	448.8	749.7	845.7	1120.9	1408.9	1503.1	1565.9	1636.1	1658.2	1661.9
22.5°	297.3	417.3	760.8	860.5	1172.5	1460.6	1540.0	1589.9	1637.9	1645.2	1647.1
25°	267.8	382.2	758.9	877.1	1216.9	1492.0	1552.9	1589.9	1617.5	1621.3	1621.3
27.5°	240.1	343.5	751.5	880.8	1250.1	1499.4	1547.4	1573.2	1586.1	1593.6	1593.6
30°	216.0	306.5	733.1	873.4	1264.9	1492.0	1530.8	1543.7	1556.6	1567.7	1573.2
32.5°	197.6	271.5	705.3	858.6	1266.7	1473.5	1501.3	1508.6	1527.0	1552.9	1562.2
35°	181.0	236.4	674.0	838.3	1255.7	1444.0	1462.4	1469.9	1506.8	1545.6	1558.4
37.5°	164.4	210.5	633.4	803.3	1239.0	1408.9	1421.8	1434.7	1492.0	1538.1	1552.9
40°	147.7	188.3	585.3	764.4	1213.2	1366.4	1377.6	1397.8	1473.5	1527.0	1541.8
42.5°	134.8	169.9	533.6	723.9	1180.0	1318.5	1335.1	1364.6	1451.3	1508.6	1525.2
45°	123.7	151.4	478.2	668.4	1137.5	1268.5	1292.6	1333.2	1425.5	1480.9	1495.7
47.5°	112.6	138.5	421.0	611.2	1091.3	1218.7	1250.1	1296.2	1390.4	1444.0	1456.9
50°	103.4	125.5	363.8	550.2	1041.4	1165.2	1202.1	1250.1	1346.2	1396.0	1412.6
52.5°	96.0	114.5	310.2	489.3	984.2	1109.8	1152.3	1202.1	1292.6	1340.6	1351.7
55°	88.6	105.3	264.0	424.7	925.1	1050.7	1096.8	1144.8	1233.5	1274.1	1281.5
57.5°	85.0	97.8	225.3	363.8	862.4	984.2	1035.9	1080.2	1163.3	1194.7	1202.1
60°	79.4	92.3	195.7	312.1	794.0	921.5	965.8	1010.0	1080.2	1106.1	1111.6
62.5°	73.9	88.6	173.5	262.2	723.9	847.6	891.9	932.5	991.6	1010.0	1017.4
65°	70.2	85.0	156.9	225.3	651.8	770.0	814.4	849.4	897.4	915.9	919.5
67.5°	66.4	81.2	144.0	193.9	579.8	692.5	725.7	758.9	795.8	814.4	816.2
70°	60.9	77.5	133.0	171.7	505.9	603.8	631.6	666.6	696.2	705.3	710.9
72.5°	57.3	72.0	125.5	155.1	430.2	518.9	544.7	565.0	590.9	600.1	600.1
75°	51.7	64.6	118.2	138.5	352.7	424.7	446.8	467.2	487.5	491.2	485.6
77.5°	46.2	57.3	101.6	116.4	275.1	336.1	354.5	365.6	382.2	385.9	387.7
80°	38.8	49.8	79.4	90.5	199.4	247.4	260.4	269.6	284.4	284.4	288.1
82.5°	29.5	38.8	57.3	64.6	134.8	169.9	181.0	186.5	195.7	195.7	195.7
85°	18.4	24.0	36.9	42.5	81.2	103.4	110.8	112.6	120.0	121.9	121.9
87.5°	9.3	12.9	24.0	25.9	42.5	53.6	53.6	57.3	57.3	55.4	53.6
90°	17.2	30.9	44.7	48.1	75.5	112.1	130.5	116.0	87.0	65.2	65.2
92.5°	68.6	185.4	302.2	331.4	465.9	645.2	734.9	644.0	462.4	326.2	313.3
95°	164.8	378.5	592.2	645.6	1146.5	1814.3	2148.1	1916.9	1454.5	1107.6	1068.3
97.5°	285.0	473.5	662.0	709.2	1544.3	2657.7	3214.4	3068.3	2776.0	2556.8	2482.0
100°	377.7	548.7	719.7	762.4	1689.1	2924.6	3542.4	3553.0	3574.4	3590.5	3501.4
102.5°	456.7	616.2	775.7	815.6	1755.5	3008.6	3635.2	3821.4	4193.8	4473.1	4396.8
105°	590.7	725.8	860.9	894.7	1804.7	3018.1	3624.8	4042.3	4877.2	5503.3	5462.3
107.5°	728.1	854.0	979.9	1011.4	1813.8	2883.8	3418.8	4001.1	5165.6	6039.1	6049.0
110°	820.8	934.5	1048.2	1076.6	1800.2	2764.7	3247.1	3898.1	5200.0	6176.5	6219.2



TEST NUMBER: P938256

CATALOG NUMBER: SQ4-FB-150U-050D-93050-1D-UNV-STD-W-12-5000K

CANDELA DISTRIBUTION (continued):

	0°	10°	20°	22.5°	30°	40°	45°	50°	60°	67.5°	70°
112.5°	911.8	1020.2	1128.6	1155.7	1800.7	2660.8	3090.8	3757.0	5089.5	6088.9	6154.5
115°	1049.2	1149.1	1249.2	1274.1	1817.3	2541.6	2903.7	3545.5	4829.1	5791.8	5882.9
117.5°	1184.8	1275.6	1366.4	1389.1	1851.0	2466.9	2774.8	3354.1	4512.6	5381.5	5482.4
120°	1263.8	1349.3	1434.7	1456.1	1878.5	2441.7	2723.4	3252.6	4311.1	5105.0	5203.1
122.5°	1341.0	1427.3	1513.6	1535.1	1918.1	2428.6	2683.9	3160.4	4113.7	4828.5	4925.3
125°	1459.6	1538.1	1616.8	1636.4	1971.3	2417.8	2640.9	3045.8	3855.5	4462.8	4551.9
127.5°	1555.7	1635.1	1714.4	1734.3	2024.4	2411.4	2604.9	2952.5	3647.7	4169.2	4244.3
130°	1607.3	1692.7	1778.1	1799.5	2063.3	2415.2	2591.1	2900.6	3519.5	3983.7	4053.2
132.5°	1660.5	1745.9	1831.4	1852.7	2094.8	2417.7	2579.1	2856.1	3410.2	3825.8	3888.0
135°	1739.4	1817.2	1895.1	1914.6	2129.2	2415.5	2558.5	2790.5	3254.5	3602.5	3656.1
137.5°	1820.2	1897.2	1974.3	1993.6	2180.7	2430.2	2555.0	2751.2	3143.5	3437.7	3481.6
140°	1887.1	1958.1	2029.1	2046.8	2212.2	2432.7	2543.0	2712.4	3051.3	3305.4	3346.5
142.5°	1938.6	2004.2	2069.9	2086.3	2238.5	2441.5	2543.0	2691.9	2989.5	3212.8	3248.1
145°	2017.6	2074.9	2132.1	2146.4	2272.9	2441.5	2525.9	2647.6	2891.0	3073.6	3100.3
147.5°	2096.6	2152.3	2208.0	2221.9	2323.2	2458.3	2525.9	2621.7	2813.2	2956.9	2979.0
150°	2148.1	2198.5	2248.9	2261.5	2349.6	2467.1	2525.9	2606.8	2768.6	2889.9	2907.8
152.5°	2201.4	2239.5	2277.6	2287.2	2366.7	2472.8	2525.9	2595.0	2733.1	2836.7	2850.3
155°	2280.4	2308.6	2336.8	2343.9	2404.5	2485.4	2525.9	2580.8	2690.8	2773.2	2782.2
157.5°	2338.7	2366.2	2393.6	2400.5	2442.3	2498.0	2525.9	2568.6	2654.1	2718.2	2724.5
160°	2378.2	2399.6	2421.0	2426.3	2459.5	2503.7	2525.9	2562.5	2635.7	2690.7	2694.4
162.5°	2417.7	2433.7	2449.7	2453.7	2477.8	2509.8	2525.9	2556.8	2618.6	2665.0	2668.4
165°	2460.6	2475.1	2489.6	2493.3	2504.1	2518.6	2525.9	2548.0	2592.2	2625.4	2629.1
167.5°	2500.2	2507.1	2513.8	2515.6	2524.8	2537.0	2543.0	2557.5	2586.5	2608.3	2609.8
170°	2525.9	2532.7	2539.6	2541.4	2541.9	2542.7	2543.0	2557.5	2586.5	2608.3	2608.3
172.5°	2539.6	2541.1	2542.7	2543.0	2543.0	2543.0	2543.0	2554.5	2577.4	2594.6	2593.2
175°	2558.5	2558.5	2558.5	2558.5	2553.4	2546.5	2543.0	2550.3	2564.8	2575.7	2575.7
177.5°	2558.5	2558.5	2558.5	2558.5	2554.5	2549.2	2546.5	2552.2	2563.7	2572.2	2570.6
180°	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5	2558.5



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CANDELA DISTRIBUTION (continued):

	80°	90°
0°	574.3	574.3
2.5°	613.0	609.3
5°	788.5	792.2
7.5°	1061.8	1059.9
10°	1320.3	1336.9
12.5°	1508.6	1512.3
15°	1623.1	1630.5
17.5°	1667.5	1669.3
20°	1669.3	1665.6
22.5°	1648.9	1645.2
25°	1625.0	1623.1
27.5°	1602.8	1604.7
30°	1593.6	1599.1
32.5°	1593.6	1602.8
35°	1597.2	1606.5
37.5°	1595.4	1606.5
40°	1588.0	1600.9
42.5°	1567.7	1577.0
45°	1536.3	1547.4
47.5°	1495.7	1503.1
50°	1444.0	1451.3
52.5°	1379.4	1381.2
55°	1301.8	1309.2
57.5°	1218.7	1220.5
60°	1126.4	1131.9
62.5°	1028.6	1028.6
65°	925.1	928.8
67.5°	818.0	827.2
70°	709.1	710.9
72.5°	602.0	602.0
75°	491.2	493.0
77.5°	385.9	385.9
80°	286.2	288.1
82.5°	197.6	201.3
85°	123.7	123.7
87.5°	57.3	51.7
90°	65.2	65.2
92.5°	261.4	209.5
95°	911.0	753.8
97.5°	2182.8	1883.7
100°	3145.0	2788.6
102.5°	4091.5	3786.2
105°	5298.3	5134.2
107.5°	6088.7	6128.4
110°	6390.2	6561.2



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CANDELA DISTRIBUTION (continued):

	80°	90°
112.5°	6417.1	6679.6
115°	6246.8	6610.9
117.5°	5886.1	6289.8
120°	5595.3	5987.6
122.5°	5312.3	5699.2
125°	4908.3	5264.7
127.5°	4545.1	4845.7
130°	4331.0	4608.8
132.5°	4136.7	4385.5
135°	3870.6	4085.0
137.5°	3657.1	3832.6
140°	3510.6	3674.6
142.5°	3389.2	3530.4
145°	3207.3	3314.1
147.5°	3067.6	3156.0
150°	2979.6	3051.3
152.5°	2904.4	2958.6
155°	2818.0	2853.8
157.5°	2749.7	2774.8
160°	2708.9	2723.4
162.5°	2682.1	2695.9
165°	2643.6	2658.1
167.5°	2615.9	2622.0
170°	2608.3	2608.3
172.5°	2587.9	2582.6
175°	2575.7	2575.7
177.5°	2564.6	2558.5
180°	2558.5	2558.5



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	0.00	0.10	0.60	1.25	2.88	12.62	13.29	13.79	14.44	16.07
	3H	0.12	0.72	1.29	1.88	3.52	14.45	15.05	15.63	16.21	17.85
	4H	0.41	0.98	1.59	2.14	3.79	15.09	15.66	16.27	16.82	18.47
	6H	0.65	1.17	1.84	2.33	3.99	15.52	16.04	16.71	17.20	18.86
	8H	0.71	1.21	1.90	2.39	4.04	15.63	16.13	16.83	17.31	18.96
	12H	0.72	1.19	1.92	2.36	4.04	15.70	16.17	16.89	17.34	19.01
4H	2H	6.63	7.20	7.82	8.36	10.01	12.87	13.44	14.06	14.60	16.25
	3H	8.18	8.65	9.37	9.84	11.50	14.90	15.38	16.10	16.56	18.22
	4H	8.26	8.70	9.46	9.88	11.55	15.67	16.10	16.86	17.28	18.96
	6H	8.26	8.64	9.46	9.83	11.50	16.20	16.57	17.40	17.77	19.44
	8H	8.23	8.58	9.43	9.77	11.46	16.36	16.71	17.56	17.89	19.58
	12H	8.18	8.50	9.39	9.70	11.39	16.44	16.76	17.66	17.96	19.65
8H	4H	9.69	10.04	10.89	11.23	12.92	15.71	16.06	16.91	17.25	18.93
	6H	9.93	10.22	11.14	11.45	13.13	16.33	16.62	17.55	17.85	19.53
	8H	9.94	10.19	11.16	11.40	13.10	16.55	16.80	17.78	18.01	19.71
	12H	9.90	10.12	11.13	11.33	13.06	16.69	16.91	17.92	18.12	19.85
12H	4H	9.83	10.15	11.04	11.35	13.03	15.65	15.97	16.87	17.17	18.86
	6H	10.19	10.44	11.41	11.64	13.34	16.31	16.56	17.54	17.77	19.47
	8H	10.24	10.46	11.47	11.67	13.40	16.54	16.76	17.76	17.96	19.69